

**-- REMARKS --**

The present amendment replies to a Non-Final Office Action dated April 19, 2005.

Claims 1-24 are pending in the present application. Claims 1, 14, 16, 18, and 19 have been amended, claim 13 has been cancelled, and claim 25 has been added herein. In the Non-Final Office Action, the Examiner rejected claims 1-24 on various grounds. The Applicants respond to each ground of rejection as subsequently recited herein and request reconsideration of the present application.

In the Detailed Action section of the Office Action, the Examiner made a blanket rejection of claims 1-24, but only set out the locations in the references where the elements of claim 1 are to be found. The Examiner failed to set out any basis for rejecting claims 2-24. Should the Examiner maintain the rejection under 35 U.S.C. §102(b) and §102(e), the Applicant respectfully requests that the Examiner particularly point out the specific location in the references where each individual element of the Applicant's invention as claimed in the independent and dependent claims is to be found.

The Examiner also noted that the cited references did not have a method for tuning a differential transconductor written out structurally, but asserted that the method resides inherently in the apparatus. The Applicant respectfully points out that the Examiner must provide a basis in fact and/or technical reasoning to reasonably support the determination that the allegedly inherent characteristic necessarily flows from the teachings of the applied prior art. *See* MPEP 2112. Should the Examiner maintain the rejection of claims under 35 U.S.C. §102(b) and §102(e), the Applicant respectfully requests that the Examiner provide a basis in fact and/or technical reasoning to support the determination of inherency for each individual element of the Applicant's invention as claimed in independent claim 14 and dependent claims 15-24.

A. Claims 1-24 were rejected under 35 U.S.C. §102(b) as anticipated by U.S. Patent No. 5,731,742 to *Wojewoda*.

The Applicant has thoroughly considered the Examiner's remarks concerning patentability of the claims over U.S. Patent No. 5,731,742 to *Wojewoda* et al. (the "*Wojewoda* patent"). The Applicant has also thoroughly read the *Wojewoda* patent. The Applicant respectfully asserts that the *Wojewoda* patent fails to include each and every element of the Applicant's invention as claimed, as required to maintain a rejection under 35 U.S.C. §102(b). *See* MPEP 2131. The Applicant asserts that the *Wojewoda* patent fails to disclose, teach, or suggest a tunable differential transconductor having a differentially-connected pair of FETs connected to said tail current sink with only one of said pair of FETs being a composite FET comprising a main FET and a switchable tuning element connected in parallel as recited in amended independent claim 1. The Applicant also asserts that the *Wojewoda* patent fails to disclose, teach, or suggest a method for tuning a differential transconductor including changing said effective channel dimension of at least one of said composite FET to establish at least one of (a) a desired transconductance linearity, and (b) a desired offset of said differential transconductor as recited in amended independent claim 14. Withdrawal of the rejection of independent claims 1 and 14 under 35 U.S.C. §102(b) is respectfully requested.

Claims 2-12 and 15-24 depend directly or indirectly from amended independent claim 1 and amended independent claim 14, respectively. Therefore, the dependent claims include all the elements and limitations of their respective amended independent claim. The Applicant therefore respectfully submits that dependent claims 2-12 and 15-24 are allowable over the *Wojewoda* patent for at least the same reasons as set forth above for the amended independent claim. Withdrawal of the rejection of dependent claims 2-12 and 15-24 under 35 U.S.C. §102(b) is respectfully requested.

**B.** Claims 1-24 were rejected under 35 U.S.C. §102(e) as anticipated by U.S. Patent No. 6,531,916 to *Beatson*.

The Applicant has thoroughly considered the Examiner's remarks concerning patentability of the claims over U.S. Patent No. 6,531,916 to *Beatson* (the "*Beatson* patent"). The Applicant has also thoroughly read the *Beatson* patent. The Applicant respectfully asserts that the *Beatson* patent fails to include each and every element of the Applicant's invention as claimed, as required to maintain a rejection under 35 U.S.C. §102(e). *See* MPEP 2131. The Applicant asserts that the *Beatson* patent fails to disclose, teach, or suggest a tunable differential transconductor having a differentially-connected pair of FETs connected to said tail current sink with only one of said pair of FETs being a composite FET comprising a main FET and a switchable tuning element connected in parallel as recited in amended independent claim 1. The Applicant also asserts that the *Beatson* patent fails to disclose, teach, or suggest a method for tuning a differential transconductor including changing said effective channel dimension of at least one of said composite FET to establish at least one of (a) a desired transconductance linearity, and (b) a desired offset of said differential transconductor as recited in amended independent claim 14. Withdrawal of the rejection of independent claims 1 and 14 under 35 U.S.C. §102(e) is respectfully requested.

Claims 2-12 and 15-24 depend directly or indirectly from amended independent claim 1 and amended independent claim 14, respectively. Therefore, the dependent claims include all the elements and limitations of their respective amended independent claim. The Applicant therefore respectfully submits that dependent claims 2-12 and 15-24 are allowable over the *Beatson* patent for at least the same reasons as set forth above for the amended independent claim. Withdrawal of the rejection of dependent claims 2-12 and 15-24 under 35 U.S.C. §102(e) is respectfully requested.

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C. Claim 25 has been added.

Claim 25 has been added herein to more particularly point out and distinctly claim the Applicant's invention. Claim 25 is allowable over the cited references because the cited references fail to disclose, teach, or suggest each and every element of the Applicant's invention as recited in claim 25.

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**--SUMMARY--**

Reconsideration of the rejection of claims 1-12 and 14-24, and consideration of claim 25 is requested in light of the remarks herein. The Applicant submits that claims 1-12 and 14-25 as set forth fully satisfy the requirements of 35 U.S.C. §§102, 103, and 112. In view of foregoing remarks, favorable consideration and early passage to issue of the present application are respectfully requested.

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Respectfully submitted,



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